

# KINGSINE KF900 Optical Digital Relay Test System



\* With four fiber Ethernet interfaces and 3-way FT3 dedicated output interface

\* In accordance with IEC61850-9-1 or IEC61850-9-2 frame format and send samples FT3 frame format or publish / subscribe GOOSE messages,

\*The output sample value or GOOSE can be freely defined,

\* Has 12 channels of analog output of weak signal, to achieve a variety of protection relay, monitoring and control devices, intelligent operation box testing.

## Function Features

Provide fully test solutions to various IEC61850 relay protective devices & automation devices for all power users.

Provide 4 pairs of 100Base-FX optical interface, 3(FT3)ST optical out, support EC61850-9-1, EC61850-9-2, EC6004-7/8(FT3)and Goose optical digital message output test

Conventional analog binary input procession is compatible, providing 8 pairs analog binary input & 4 pairs binary output

Provide 1 RG-B/PPS interface, can access RG-B or PPS time signal which synchronize with GPS synchronous clock.

## Technical Parameter

|  |  |
|--|--|
| Binary Input                                 |  |
| No.  | 8 pairs  |
| Input Characteristic                         | 0V~250V(DC) or no contact (identified automatically)   |
| sample Frequency                             | 10kHz  |
| Time Resolution                              | 100 $\mu$ s  |
| Max measuring time                           | 1.50 $\times$ 10 <sup>5</sup> s  |
| Timing Error                                 | $\pm$ 1ms (0.001s~1s)<br>$\pm$ 0.1%(1s~1.50 $\times$ 10 <sup>5</sup> s)                              |
| Set Range of Debounce Time( set by software) | 0ms ~25ms  |
| Electric Isolation                           | 8 pairs input electric isolation   |
| Threshold Impedance Parameter(no contacts)   | 5 k $\Omega$ ...13k $\Omega$   |
| Synchronization Interface (GPS)              |  |
|  | KSGGPS satellite synchronization device)is optional<br>;<br>B code (RS485) synchronization interface |
| Binary Output                                |  |
| No.  | 4 pairs  |
| Type   | no contacts and no pole, controlled by software  |
| AC capacity                                  | V <sub>max</sub> :250V (DC)/I <sub>max</sub> :3A   |
| DC capacity                                  | V <sub>max</sub> :250V (DC)/I <sub>max</sub> :1A   |
| Power Supply                                 |  |
| Rated Voltage                                | 220V(AC)   |
| Allowed Voltage                              | 100V~240V(AC)  |
| Rated Frequency                              | 50Hz   |
| Allowed Frequency                            | 40~60Hz  |
| Current                                      | 1A (max.)  |
| FT3 Interface                                |  |
| Using Standard                               | IEC60044-7/8   |
| Terminal NO.                                 | 3 pairs  |
| Interface Type                               | ST   |
| Wave Length                                  | 850nm  |
| Optical Fiber Type                           | 62.5/125 $\mu$ m, multi-mode   |

|  |   |
|--|---|
| <i>Transmission Distance</i>                   | <i>1km</i>  |
| <i>Ethernet Communication Interface</i>        |   |
| <i>Type</i>                                    | <i>10/100 Base-TX(10/100 Mbit, twisted pair/ auto crossed)</i>                                |
| <i>Port No.</i>                                | <i>1 pairs</i>  |
| <i>Interface Type</i>                          | <i>RJ45</i>   |
| <i>Cable Type</i>                              | <i>5 pairs twisted pair</i>   |
| <i>State Indication</i>                        | <i>LED green(light):effective connection<br/>LED yellow(flicker): data communication</i>      |
| <i>Fiber Optic Communication Interface</i>     |   |
| <i>Type</i>                                    | <i>100Base-FX(100Mbit, fiber optic, full-duplex)</i>  |
| <i>Port No.</i>                                | <i>4 pairs</i>  |
| <i>Interface Type</i>                          | <i>SC</i>   |
| <i>Cable Type</i>                              | <i>62.5/125μm(multimode fiber orange)</i>   |
| <i>Wave Length</i>                             | <i>1300nm</i>   |
| <i>Transmission Distance</i>                   | <i>&gt; 1Km</i>   |
| <i>State Indication</i>                        | <i>SPD green(light):effective connection<br/>Link/AcT yellow(flicker): data communication</i> |
| <i>Operational Environment</i>                 |   |
| <i>Operational Temperature</i>                 | <i>-10°C~+50°C</i>  |
| <i>Storage&amp; Transportation Temperature</i> | <i>-20°C~+70°C</i>  |
| <i>Humidity</i>                                | <i>5~90% relative humidity, no</i>  |